



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,002	07/21/2003	Hidenobu Mikami	1007-020	5624

47888 7590 11/03/2005
HEDMAN & COSTIGAN P.C.
1185 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

EXAMINER

COSTALES, SHRUTI S

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,002

Applicant(s)

MIKAMI ET AL.

Examiner

Shruti S. Costales

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/21/03 & 1/30/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement submitted on July 21, 2003 was filed in compliance with the provisions of 37 CFR § 1.97. Accordingly, the information disclosure statement filed by the applicant has been considered by the Examiner.

With respect to the information disclosure statement filed on January 30, 2004, the "EPO Search Report" has not been considered by the Examiner. It is to be noted that the listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining

compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Further, with respect to the information disclosure statement filed on January 30, 2004, the reference "Patent Abstracts Japan Vol. 018, no. 562 (c-1265) 27 October 1994" has not been considered by the Examiner because the applicant has not provided a copy of this reference for the Examiner's consideration. It is to be noted that the information disclosure statement filed January 30, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 602.

More particularly, the applicant has not identified the current application by either indicating that "The specification is attached hereto" or that the specification "was filed on _____ as Application Serial No. _____". A new oath or declaration is

Art Unit: 1714

required where the applicant clearly indicates the current application by the Serial Number and filing date.

Specification

3. The abstract of the disclosure is objected to because the applicant makes improper use of legal phraseology, such as "comprising". See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Art Unit: 1714

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "A grease composition having a base oil, a thickener, and an additive including a metal salt of a dibasic acid".

5. The disclosure is objected to because on page 17, lines 3-4 currently discloses "an outer ring 3 having an inner ring rolling surface 2a on an inside perimeter". This statement is not very clear as it appears that the outer ring should have an outer ring rolling surface 3a on the outside perimeter. Clarification is requested.

Claim Objections

6. Claims 2-12 are objected to because said claims recite "A grease composition", wherein each of said claims 2-12 depends directly or indirectly from claim 1 which recites "A grease composition". It is suggested that the applicant amend claims 2-12 to recite "The grease composition" in order to properly refer back to claim 1.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 5, and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication Number 11-256184 to Idemitsu.

Pending a formal translation, a machine translation of Idemitsu has been relied upon in setting forth the following rejection.

It is to be noted that Idemitsu anticipates those embodiments of the presently cited claims wherein the dibasic acid metal salt uses an aromatic series dibasic acid such phthalic acid (Abstract; Paragraphs [0010]-[0013]).

Idemitsu discloses a grease composition having a base oil, a thickening agent, an antioxidant, and an aromatic dibasic acid metal salt (Abstract). It is further disclosed that the base oil is a mineral oil or a synthetic oil having a viscosity of 5 – 500 cst at 40° C (Abstract). The thickening agent is a metallic soap (Abstract). The antioxidant is a phenol-based antioxidant or an amine-based antioxidant (Abstract). The aromatic dibasic acid metal salt is made from an alkali metal such as sodium and lithium and an acid such as phthalic acid (Paragraphs [0010]-[0013]). The thickening agent is present in an amount of 2 – 40 wt%, the antioxidant is present in an amount of 0.1 – 10 wt%, and the dibasic metal salt is present in an amount of 0.3 – 21 wt% (Abstract).

Therefore, in light of the above discussion, it is clear that the presently cited claims are anticipated.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1714

10. Claims 1, 5, and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication Number 11-256184 to Idemitsu in view of Merker (U.S. Patent Number 2,722,516).

Pending a formal translation, a machine translation of Idemitsu has been relied upon in setting forth the following rejection.

Idemitsu discloses a grease composition having a base oil, a thickening agent, an antioxidant, and an aromatic dibasic acid metal salt (Abstract). It is further disclosed that the base oil is a mineral oil or a synthetic oil having a viscosity of 5 – 500 cst at 40° C (Abstract). The thickening agent is a metallic soap (Abstract). The antioxidant is a phenol-based antioxidant or an amine-based antioxidant (Abstract). The aromatic dibasic acid metal salt is made from an alkali metal such as sodium and lithium and an acid such as phthalic acid (Paragraphs [0009]-[0013]). The thickening agent is present in an amount of 2 – 40 wt%, the antioxidant is present in an amount of 0.1 – 10 wt%, and the dibasic metal salt is present in an amount of 0.3 – 21 wt% (Abstract).

The difference between Idemitsu and the presently claimed invention is the requirement that the dibasic acid metal salt is aliphatic.

Merker, which is drawn to grease compositions (Col. 1, lines 15-20), discloses salts of alkali metals such as sodium, potassium, and lithium and acids such as azelaic acid, heptyl malonic acid, butyl adipic acid, sebacic acid, etc. (Col. 1, lines 40-72 and Col. 2, lines 1-48), wherein the named acids are aliphatic dibasic acids. Merker also discloses sodium sebacate (Table shown in Col. 1). It would have been obvious to one of ordinary skill in the art to use Merker's aliphatic dibasic acid salts in Idemitsu because

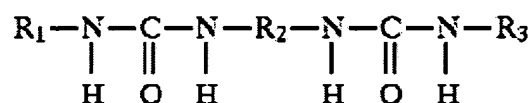
Art Unit: 1714

these salts act as antirusting agents (Col. 1, lines 15-20), which is a very desirable component in a lubricant providing antirusting properties to the lubricant itself, thereby obtaining the invention as set forth in the presently cited claims.

11. Claims 2-4, 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Idemitsu in view of Merker as applied to claims 1, 5, and 8-12 above, and further in view of Yokouchi et al. (U.S. Patent Number 5,840,666).

The difference between Idemitsu in view of Merker and the presently claimed invention is the requirement that the base oil contains alkyldiphenyl ether oil, the thickener is a urea-based compound having a specified structure, and the grease composition is used to seal a bearing.

Yokouchi, which is drawn to a grease composition (Col. 2, lines 37-39), discloses urea compounds used as thickeners (Col. 4, lines 43-67). The ureas are preferably diurea compounds and polyurea compounds (Col. 4, lines 43-67) represented by the following structure:



wherein, R_1 and R_3 each independently represents an aromatic ring-containing hydrocarbon group having 7 to 12 carbon atoms, a cyclohexyl group, an alkylcyclohexyl group having 7 to 12 carbon atoms, or an alkyl group having 8 to 20 carbon atoms and R_2 is a divalent hydrocarbon group containing an aromatic ring (Col. 5, lines 1-35). Yokouchi also discloses base oils having kinetic viscosities in the range of 10 to 400

Art Unit: 1714

mm²/sec, wherein one of the disclosed base oils includes alkyl diphenyl ether oil (Col. 5, lines 53-67 and Col. 6, lines 1-34). Further, Yokouchi discloses that the grease composition is sealed up in a sealed type deep groove ball bearing with a contact rubber seal (Col. 6, lines 61-65). It would have been obvious to one of ordinary skill in the art to use Yokouchi's diurea thickener and alkyl diphenyl ether oil as a base oil in Idemitsu because the resulting composition will have excellent lubricating action (Col. 5, lines 45-52), thereby obtaining the invention as set forth in the presently cited claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

SSC
Shruti S. Costales
October 31, 2005

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700